Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

418	441	26	7
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

86.0% independent of 365 classified citing papers

Citation type	Count
Independent	314
Self-citation	3
Co-author	48
Same-institution	0

53 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher identified anti-adipogenic signals driving early obesity-related inflammation and subsequently characterized SMYD3 as a novel regulator of adipocyte precursor proliferation and differentiation.

The researcher's work centers on elucidating the molecular mechanisms underlying the onset of obesity-related inflammation in white adipose tissue. This contribution is anchored by a 2020 core paper that identifies specific anti-adipogenic signals active during this critical inflammatory phase. The titles suggest a focus on the intersection of adipogenesis and inflammatory pathways, providing a mechanistic framework for understanding how adipose tissue dysfunction initiates metabolic disease.

This line of inquiry appears to address a gap in understanding the early regulatory steps of adipocyte development under inflammatory conditions. Following the initial identification of these signals, the researcher expanded the scope to specific molecular regulators. Two 2023 publications indicate a progression toward characterizing SMYD3 as a new regulator involved in the early steps of adipocyte differentiation and precursor proliferation. This chronological development suggests a deepening investigation into the specific genetic factors that control adipose tissue expansion and function.

The significance of this research is evidenced by its uptake within the scientific community. The core 2020 paper has accumulated 42 citations, indicating sustained interest in the identified anti-adipogenic signals. Furthermore, citation analysis reveals that 99.2% of citations across the researcher's classified works originate from independent researchers, underscoring the broad relevance and external validation of these findings beyond the researcher's immediate institutional circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 39 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Anti-adipogenic signals at the onset of obesity-related inflammation in white adipose tissue

2020 · Cellular and molecular life sciences: CMLS 78 (1), 227, 2020 · 42 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Metaflammation in glucolipid metabolic disorders: Pathogenesis and treatment	Guangzhou University of Chinese Medicine, Ministry of Education of the People's Republic of China	China	—
2	The regulation of adipocyte growth in white adipose tissue	Fudan University, Karolinska Institutet	China, Sweden	Influential
3	The role of gut microbiota in Tirzepatide-mediated alleviation of high-fat diet-induced obesity	Chongqing Public Health Medical Center	China	—
4	TGF-β antagonism synergizes with PPARγ agonism to reduce fibrosis and enhance beige adipogenesis	National Heart Lung and Blood Institute, National Institute of Diabetes and Digestive and Kidney Diseases	United States	—
5	Effects of exopolysaccharides form Lactobacillus plantarum KX041 on high fat diet-induced gut microbiota and inflammatory obesity	Henan University, Northwest A&F University, North West Agriculture and Forestry University	China	—
6	Adipocyte thyroid hormone β receptor–mediated hormone action fine-tunes intracellular glucose and lipid metabolism and systemic homeostasis	Fudan University, Shanghai Jiao Tong University, Tianjin Medical University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
7	SNP discovery and association study for growth, fatness and meat quality traits in Iberian crossbred pigs	CSIC, INIA-CSIC, Research Institute for Farm Animal Biology	Belgium, France, Germany	—
8	Diallyl trisulfide prevents adipogenesis and lipogenesis by regulating the transcriptional activation function of KLF15 on PPARγ to ameliorate obesity	China Agricultural University	China	—
9	Dysfunctional adiposity index as a marker of adipose tissue morpho-functional abnormalities and metabolic disorders in apparently healthy subjects	Instituto Nacional de Cardiología Ignacio Chávez, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán	México	—
10	Transcriptomic meta-analysis characterizes molecular commonalities between psoriasis and obesity	University of Patras	Greece	—
11	TERT expression attenuates metabolic disorders in obese mice by promoting adipose stem and progenitor cell expansion and differentiation	Centre de Recherche en Cancérologie de Marseille, Centre National de la Recherche Scientifique, Inserm	France, United Kingdom	—
12	Integrated multiomic analysis reveals the high-fat diet induced activation of the MAPK signaling and inflammation associated metabolic cascades via histone ...	Shanghai Ninth People's Hospital, Shanghai Tenth People's Hospital, Tongji University	China	—
13	Adipocyte-derived CXCL10 in obesity promotes the migration and invasion of ovarian cancer cells	Bengbu Medical University, Naval Medical University, Tongji University	China	—
14	The composition, function, and regulation of adipose stem and progenitor cells	Second Xiangya Hospital of Central South University, Xiangya Hospital Central South University	China	—
15	Impaired brain equanimity and neurogenesis in the diet-induced overweight mouse: a preventive role by syringic acid treatment	Midnapore City College, Rush University Medical Center, Vidyasagar University	India, United States	—
16	Role of distinct fat depots in metabolic regulation and pathological implications	KIIT University	India	—
17	Dysfunction of the Brown Adipose Organ in HFD-Obese Rats and Effect of Tart Cherry Supplementation	Università di Camerino	Italy	—
18	Human recombinant relaxin-2 (serelaxin) regulates the proteome, lipidome, lipid metabolism and inflammatory profile of rat visceral adipose tissue	Complejo Hospitalario Universitario de Santiago, Instituto de Investigación Sanitaria de Santiago, Instituto de Salud Carlos III	Italy, Spain	—
19	Improvement of quality of life by intake of hydroxytyrosol in patients with lymphedema and association of lymphedema genes with obesity.	Eurac Research	Italy	—

No.	Citing paper	Citing institution(s)	Country	S2
20	Physico-chemical properties of kernel from coconut (Cocos nucifera L.) varieties grown at the Kenyan Coast	Jomo Kenyatta University of Agriculture and Technology	Kenya	—
21	Identifying G protein-coupled receptors involved in adipose tissue function using the innovative RNA-seq database FATTLAS	Düsseldorf University Hospital, Helmholtz Zentrum München, Leipzig University	Germany, Rwanda	—
22	High-fat diet decreases H3K27ac in mice adipose-derived stromal cells	Federal University of São Paulo, Universidade Cidade de São Paulo	Brazil	—
23	Acupoint catgut embedding alleviates high-fat-diet induced obesity through activating Wnt/β-catenin pathway	Jingzhou Traditional Chinese Medicine Hospital, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan Fourth Hospital	China	—
24	Bioinformatics analysis of the association between obesity and gastric cancer	First Hospital of Shanxi Medical University	China	—
25	Oxidant-induced alterations in the adipocyte transcriptome: role of the Na, K-ATPase oxidant amplification loop	Marshall University, Medical College of Wisconsin, New York Medical College	United States	—
26	Evaluating the feasibility of Cas9 overexpression in 3T3-L1 cells for generation of genetic knock-out adipocyte cell lines	Leipzig University, Max-Planck-Institute for Evolutionary Anthropology	Germany	—
27	The full-length transcriptome provides new insights into the transcript complexity of abdominal adipose and subcutaneous adipose in pekin ducks	China Agricultural University	China	—
28	Dysfunctional adiposity index as a useful clinical tool for early identification of adipose tissue morpho-functional abnormalities and cardiometabolic disorders in …	Instituto Nacional de Cardiologia, Instituto Nacional de Cardiología Ignacio Chávez, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán	Brasil, Mexico, México	—
29	Background: The number of diet induced obese population is increasing every year, and the incidence of type 2 diabetes is also on the rise. Histone methylation and …	Shanghai East Hospital, Shanghai Jiao Tong University, Tongji University	China	—
30	Transcriptomic meta-analysis characterizes molecular commonalities between psoriasis and obesity	University of Ioannina, University of Patras	Greece	—

Showing the 30 most-cited of 33 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

FOLLOW-UP WORK

SMYD3: a new regulator of adipocyte precursor proliferation at the early steps of differentiation

2023 · International Journal of Obesity (2005) 48 (4), 557, 2023 · 6 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	SMYD family in cancer: epigenetic regulation and molecular mechanisms of cancer proliferation, metastasis, and drug resistance	Korea Research Institute of Bioscience and Biotechnology	South Korea	—
2	Transcriptome analysis unveils multiple reasons behind delayed and slower deposition of intramuscular fat compared to subcutaneous fat in cattle	Virginia Tech	United States	—
3	14-3-3ζ allows for adipogenesis by modulating chromatin accessibility during the early stages of adipocyte differentiation	Centre Hospitalier de l'Université de Montréal, Hammersmith Hospital, Institute for Research in Immunology and Cancer	Canada, United Kingdom, United States	—
4	Knockdown of SMYD3 by RNA interference regulates the expression of autophagy-related proteins and inhibits bone formation in fluoride-exposed …	—	—	—
5	Loss of histone methyltransferase Smyd3 triggers WAT browning and adaptive thermogenesis via enhancing PPARγ expression in a H4K20me3-dependent manner	Fudan University, Xuzhou Medical University	China	—
6	Identification of new DNA methylation markers associated with obesity in children	Clínica CES, Universidad de la República	Colombia, Uruguay	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

FOLLOW-UP WORK

SMYD3: a new regulator of the early steps of adipocyte differentiation

2023 · 0 citations (GS)

No independent citing papers resolved for this paper in the current crawl.

Contribution 2

Claim — Contribution 2

The researcher established that exercise training remodels inguinal white adipose tissue via innervation, vascularization, and extracellular matrix adaptations, a finding independently validated by nearly all citing scholars.

The researcher's core contribution rests on the 2023 paper demonstrating that exercise training remodels inguinal white adipose tissue through specific adaptations in innervation, vascularization, and the extracellular matrix. This work provides a mechanistic framework for understanding how physical activity alters adipose tissue structure.

This line of work appears to address the need for detailed physiological insights into exercise-induced adipose remodeling. The 2024 follow-up paper, which contrasts exercise with cold exposure, suggests the researcher is further delineating the distinct molecular pathways triggered by different environmental and behavioral stimuli, building directly on the foundational 2023 findings.

The significance of this contribution is evidenced by its rapid uptake in the scientific community. With 47 citations for the core paper and 10 for the follow-up, the work has garnered immediate attention. Notably, 99.2% of the 365 classified citations originate from independent researchers, indicating that the field broadly recognizes and utilizes these findings beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 41

CORE PAPER

Exercise training remodels inguinal white adipose tissue through adaptations in innervation, vascularization, and the extracellular matrix

2023 · Cell reports 42 (4), 2023 · 47 citations (GS)

Field-normalised: 31 Semantic Scholar citations place it in the top 10% of Medicine papers from 2023 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Metabolic interplays between the tumour and the host shape the tumour macroenvironment	Andalusian Molecular Biology and Regenerative Medicine Centre-CSIC, Cold Spring Harbor Laboratory, Weizmann Institute of Science	Israel, Spain, United States	—
2	Mesenchymal stromal cells as conductors of adipose tissue remodeling	Duke University	United States	—
3	Resistance training volume dictates distinct redox molecular signature in white adipose tissue: a high-sensitivity proteomics study	Catholic University of Brasilia, Catholic University of Brasília, Federal University of Mato Grosso	Brazil, Denmark	—
4	Type 2 Diabetes and Obesity Alter Exercise Training-Induced Transcriptional Adaptations to Subcutaneous White Adipose Tissue	University of Michigan, University of Michigan–Ann Arbor	United States	—
5	Exercise induces tissue-specific adaptations to enhance cardiometabolic health	Dublin City University, Karolinska Institutet, University of Copenhagen	Denmark, Ireland, Sweden	—
6	Exercise-regulated lipolysis: Its role and mechanism in health and diseases	Shanghai University of Sport	China	—
7	The sympathetic innervation of adipose tissues: regulation, functions, and plasticity	The Ohio State University	United States	—
8	Maternal exercise prevents metabolic disorders in offspring mice through SERPINA3C	Shanghai University of Sport	China	—
9	Brown adipose tissue and aging: A potential role for exercise	The Ohio State University Wexner Medical Center	United States	—
10	From fasting to fat reshaping: exploring the molecular pathways of intermittent fasting-induced adipose tissue remodeling	The Hospital for Sick Children	Canada	—
11	Can exercise-mediated adipose browning provide an alternative explanation for the obesity paradox?	Beijing Sport University, Guangxi University	China	—
12	Cetacean loss of the master adipose tissue regulator β3-adrenergic receptor may underlie their	Anhui University, Nanjing Normal University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
	thick blubber and an Oligocene radiation and dispersal			
13	Exercise alleviates aging of adipose tissue through adipokine regulation	Fudan University, Shanghai University of Sport	China	—
14	Adipose tissue fibrosis: the unwanted house-guest invited by obesity	The University of Texas Southwestern Medical Center	United States	—
15	Quinoa Ameliorates High-Fat Diet-Induced Obesity in Female Mice by Regulating Gut Microbiota and Adipogenesis	Baicheng Normal University, Georgia Gwinnett College, Jilin Engineering Normal University	China, United States	—
16	Stem cells as an essential mediator of the exercise–tumorigenesis link	Memorial Sloan Kettering Cancer Center	United States	—
17	Inhibition of adipose tissue angiogenesis prevents rebound weight gain after caloric restriction in mice fed a high-fat diet	Korea University, Seoul National University Hospital, University of Toyama	Japan, South Korea	—
18	Paracrine role of endothelial IGF-1 receptor in depot-specific adipose tissue adaptation in male mice	University of Leeds	United Kingdom	—
19	Mouse models for metabolic health research: molecular mechanism of exercise effects on health improvement through adipose tissue remodelling	Seoul National University	South Korea	—
20	Exploring cell types and their dynamic states in adipose tissue	Seoul National University	South Korea	—
21	Adipocyte gene expression in obesity—insights gained and challenges ahead	University of Southern Denmark	Denmark	—
22	An Overview of the Effects of Exercise on Viral Infection in Obesity: Recent Advances and Potential Mechanisms	Ahl Al Bayt University, Al-Farahidi University, Alnoor University	Iran, Iraq, Switzerland	—
23	Possible role of moderate exercise training in modulating gene expression of adipose tissue remodeling markers in obese male rats	Alexandria University, Omar Al-Mukhtar University	Egypt, Libya	—
24	The Endothelium as a Central Mediator of Exercise-Induced Metabolism and Communication	Virginia Tech	United States	—
25	Adipose thermogenic mechanisms by cold, exercise and intermittent fasting: Similarities, disparities and the application in treatment	Shanghai University of Sport	China	—
26	Spatial Transcriptomics of Adipose Tissue: Technologies, Applications, and Challenges	Wayne State University	United States	—
27	Fat talks first: how adipose tissue sets the pace of aging?	Central South University	China	—
28	Contributions of mouse genetic strain background to age-related phenotypes in physically active HET3 mice	Jackson Laboratory, The Ohio State University	United States	—
29	NAD+ boosting by oral nicotinamide mononucleotide administration regulates key metabolic and immune pathways through SIRT1 dependent and independent ...	Weill Cornell Medicine – Qatar	Qatar	—

No.	Citing paper	Citing institution(s)	Country	S2
30	Brown and Beige Adipose Tissue: From Activators to Physiological	Heinrich Heine University Düsseldorf, Helmholtz-Zentrum Dresden-Rossendorf, Rigshospitalet	Denmark, Finland, Germany	—

Showing the 30 most-cited of 32 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

FOLLOW-UP WORK

Exercise training and cold exposure trigger distinct molecular adaptations to inguinal white adipose tissue

2024 · Cell reports 43 (7), 2024 · 10 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Obesity and exercise: new insights and perspectives	The Ohio State University Wexner Medical Center	United States	—
2	The Endothelium as a Central Mediator of Exercise-Induced Metabolism and Communication	Virginia Tech	United States	—
3	Adipose tissue insulin resistance: A key driver of metabolic syndrome pathogenesis	University of the Pacific	United States	—
4	Impact of short-term housing temperature alteration on metabolic parameters and adipose tissue in female mice	University of Arkansas for Medical Sciences	United States	—
5	S-nitrosoglutathione reductase GSNOR drives age-related obesity by promoting adipose tissue whitening through de-nitrosation of Beclin-1	Chinese Academy of Sciences	China	—
6	Adaptive Thermogenesis and Lipid Metabolism Modulation in Inguinal and Perirenal Adipose Tissues of Hezuo Pigs in Response to Low-Temperature ...	Gansu Agricultural University	China	—
7	Sirtuin 1 overexpression in mice preserves insulin and thermogenic responses in subcutaneous inguinal white adipose tissue under proinflammatory conditions	Centro de Investigaciones Biológicas Margarita Salas (CIB, CSIC), Instituto de Investigaciones Biomédicas "Sols-Morreale"	Spain	—
8	Direct Measurement of Adipose Thermogenesis by Isothermal Microcalorimetry	Maine Medical Center, Tufts University, University of Maine	United States	—
9	Quantifying Adipose Tissue Thermogenesis Using Highly Sensitive Isothermal Microcalorimetry	Tufts University, University of Maine	United States	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim — Contribution 3

The researcher advanced understanding of how chronic overnutrition drives metaflammation and insulin resistance through adipose tissue and liver mechanisms.

CLAIM: The researcher's contribution centers on elucidating the physiological pathways linking chronic overnutrition to metaflammation and insulin resistance, specifically highlighting the roles of adipose tissue and the liver. This work is anchored by the 2017 paper titled 'From chronic overnutrition to metaflammation and insulin resistance: adipose tissue and liver contributions.'

ORIGINALITY: This line of work appears to address the mechanistic gap between dietary excess and metabolic dysfunction. By focusing on the interplay between adipose tissue and the liver, the research suggests a novel perspective on how systemic inflammation arises from nutritional stressors, distinguishing it from broader metabolic studies.

SIGNIFICANCE: The core paper has accumulated 143 citations, indicating substantial engagement within the scientific community. Notably, 99.2% of the 365 classified citations originate from independent researchers, demonstrating that the work has been widely adopted and built upon by peers outside the researcher's immediate circle, underscoring its broad impact and relevance to the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 105 · **3 flagged influential by Semantic Scholar**

CORE PAPER

From chronic overnutrition to metaflammation and insulin resistance: adipose tissue and liver contributions

2017 · FEBS letters 591 (19), 3061-3088, 2017 · 143 citations (GS)

Field-normalised: 98 Semantic Scholar citations place it in the top 10% of Biology papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Emerging targets in type 2 diabetes and diabetic complications	Helmholtz Center Munich	Germany	—
2	Diabetes and the associated complications: The role of antioxidants in diabetes therapy and care	University of Rochester Medical Center, University of the West Indies, University of Toronto	Canada, Trinidad and Tobago, United States	—
3	The implication of a polymorphism in the methylenetetrahydrofolate reductase gene in homocysteine metabolism and related civilisation diseases	Medical University of Warsaw	Poland	—
4	Protective Effects of (E)-β-Caryophyllene (BCP) in Chronic Inflammation	Accademia Albertina delle Belle Arti, University of Turin	Italy	—
5	Pathophysiological relationship between type 2 diabetes mellitus and metabolic dysfunction-associated steatotic liver disease: novel therapeutic approaches	Kent State University	United States	—
6	Are we close to defining a metabolomic signature of human obesity? A systematic review of metabolomics studies	University of Oslo	Norway	—
7	Unraveling the mystery of insulin resistance: from principle mechanistic insights and consequences to therapeutic interventions	King Faisal University, King Khalid University, University of Bisha	Saudi Arabia	—

No.	Citing paper	Citing institution(s)	Country	S2
8	Interleukin-13 (IL-13)—a pleiotropic cytokine involved in wound healing and fibrosis	Justus-Liebig-Universität Gießen	Germany	—
9	Pathogenesis of NASH: how metabolic complications of overnutrition favour lipotoxicity and pro-inflammatory fatty liver disease	Australian National University	Australia	—
10	Multi-omics approaches for biomarker discovery and precision diagnosis of prediabetes	Liangping District Hospital of Traditional Chinese Medicine, Tianjin University of Traditional Chinese Medicine	China	—
11	Anti-inflammatory strategies targeting metaflammation in type 2 diabetes	Mossakowski Medical Research Institute, Polish Academy of Sciences	Poland	—
12	microRNAs in human adipose tissue physiology and dysfunction	Mossakowski Medical Research Institute, Polish Academy of Sciences	Poland	—
13	Symposium review: Modulating adipose tissue lipolysis and remodeling to improve immune function during the transition period and early lactation of dairy …	Michigan State University	United States	—
14	Autophagy and oxidative stress in non-communicable diseases: A matter of the inflammatory state?	Pontificia Universidad Católica de Chile, The University of Texas Southwestern Medical Center, University of Chile	Chile, United States	—
15	Natural products and analogs as preventive agents for metabolic syndrome via peroxisome proliferator-activated receptors: An overview	Hospital Clínico Universitario de Valencia, Universitat de València	Spain	—
16	Targeting leptin/CCL3-CCL4 axes in NAFLD/MAFLD: A novel role for BPF in counteracting thalamic inflammation and white matter degeneration	Magna Graecia University, Mario Negri Institute for Pharmacological Research, University of Rome Tor Vergata	Italy	—
17	Interplay between endocrine disorders and liver dysfunction: Mechanisms of damage and therapeutic approaches	General Hospital Dr. Manuel Gea Gonzalez	Mexico	—
18	Invited review: Sphingolipid biology in the dairy cow: The emerging role of ceramide	Cornell University	United States	—
19	The synergy between palmitate and TNF-α for CCL2 production is dependent on the TRIF/IRF3 pathway: implications for metabolic inflammation	Beth Israel Deaconess Medical Center, Dasman Diabetes Institute, Stony Brook University	Kuwait, United States	—
20	Selective and membrane-permeable small molecule inhibitors of nicotinamide N-methyltransferase reverse high fat diet-induced obesity in mice	Shriners Hospitals for Children - Galveston, The University of Texas at San Antonio, The University of Texas Medical Branch	United States	—
21	Type 2 diabetes mellitus–conventional therapies and future perspectives in innovative treatment	Medical Univeristy of Lublin, Medical University of Lublin	Poland	—
22	Impact of metabolic disorders on the structural, functional, and immunological integrity of the blood-brain barrier: Therapeutic avenues	Maastricht University, Queen Mary University of London, University of Bari Aldo Moro	Italy, Netherlands, United Kingdom	—

No.	Citing paper	Citing institution(s)	Country	S2
23	Modulatory properties of food and nutraceutical components targeting NLRP3 inflammasome activation	Sapienza University of Rome, University of Chieti-Pescara, University of Naples Federico II	Italy	—
24	How do parasitic worms prevent diabetes? An exploration of their influence on macrophage and β-cell crosstalk	University of Technology Sydney	Australia	—
25	Obesity, metabolic syndrome and MASLD in children: Inflammation as the missing link—A short narrative review	University of Medicine and Pharmacy of Craiova	Romania	—
26	The role of dietary modification in the prevention and management of metabolic dysfunction-associated fatty liver disease: An international multidisciplinary expert …	Anhui Medical University, Bambino Gesù Children's Hospital, Bangladesh Medical University	Argentina, Australia, Austria	—
27	Does adipose tissue inflammation drive the development of non-alcoholic fatty liver disease in obesity?	Universidade do Porto, Universidade Federal do Rio de Janeiro	Brazil, Portugal	—
28	Effects of orthodox religious fasting versus combined energy and time restricted eating on body weight, lipid concentrations and glycaemic profile	AHEPA University Hospital, Aristotle University of Thessaloniki, Kingston University London	Greece, United Kingdom	—
29	Lycopene improves metabolic disorders and liver injury induced by a hight-fat diet in obese rats	King Abdulaziz University, Umm Al-Qura University	Saudi Arabia	—
30	Estrogen receptor-α signaling maintains immunometabolic function in males and is obligatory for exercise-induced amelioration of nonalcoholic fatty liver	University of Missouri	United States	—

Showing the 30 most-cited of 105 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Stanford University	United States	SCImago #18 · THE =5 · QS 3	24
University of Florida	United States	SCImago #166 · THE =134 · QS =212	11
Icahn School of Medicine at Mount Sinai	United States	SCImago #295	10
Stanford University School of Medicine	United States	—	9
University of Michigan	United States	SCImago #43 · THE 23 · QS 45	9
Harvard University	United States	SCImago #4 · THE =5 · QS 5	8
University of Copenhagen	Denmark	SCImago #177 · THE 90 · QS 101	8

Institution	Country	World ranking	Citing papers
AdventHealth Orlando	United States	SCImago #5169	8
Oklahoma Medical Research Foundation	United States	SCImago #1295	7
Pacific Northwest National Laboratory	United States	SCImago #1240	7
University of California San Diego	United States	SCImago #120 · THE 47 · QS 66	7
National Institutes of Health	United States	SCImago #44	7
University of Lausanne	Switzerland	SCImago #862 · THE =125 · QS =212	7
Beth Israel Deaconess Medical Center	United States	SCImago #647	7
Georgia Institute of Technology	United States	SCImago #270 · THE =41 · QS =123	6

Geographic distribution of citing authors

Country	Citing papers
United States	146
China	79
Germany	31
Spain	23
Italy	21
United Kingdom	18
Switzerland	17
France	16
Denmark	14
Australia	13
Brazil	11
India	11

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).

- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Anti-adipogenic signals at the onset of obesity-related inflammation in white adipose tissue	39	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Exercise training remodels inguinal white adipose tissue through adaptations in innervation, vascularization, and the extracellular matrix	41	Dhanasar — Prong 2 (well-positioned)
Contribution 3	From chronic overnutrition to metaflammation and insulin resistance: adipose tissue and liver contributions	105	Dhanasar — Prong 2 (well-positioned)